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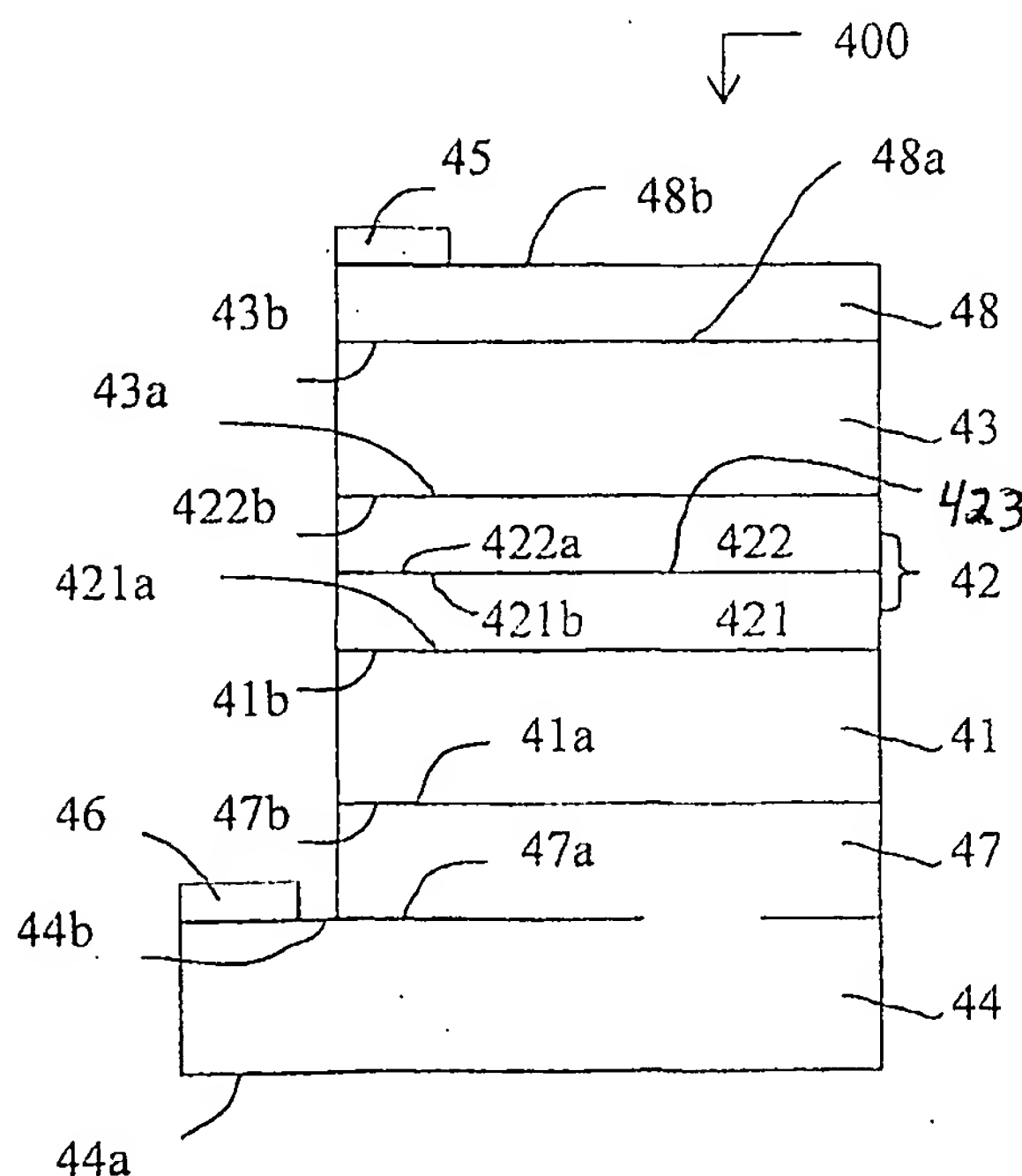
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(54) Title: PHOTOTRANSISTORS, METHODS OF MAKING PHOTOTRANSISTORS, AND METHODS OF DETECTING
LIGHT



(57) Abstract: A phototransistor (400) comprises an
emitter (43) comprising antimony, a base (42) comprising
antimony, and a collector (41) comprising antimony.
Preferably, the emitter, the base and the collector each
comprises at least one of AlInGaAsSb, AlGaAsSb,
AlGaSb, GaSb and InGaAsSb. The base comprises an
emitter-contacting portion (422b) which is in contact
with a base-contacting portion (43a) of the emitter. The
collector comprises a base-contacting portion (41b)
which is in contact with a collector-contacting portion
(421a) of the base. The phototransistor produces an
internal gain upon being contacted with light within
a receivable wavelength range, preferably greater than
1.7 micrometers. Also, a method of making such a
phototransistor, and a method of detecting light using
such a phototransistor.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/02085

A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 257/184,187,189, 461-465; 438/48,81,87,309

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — A	US 6,452,242 B1 (Razeghi) 17 September 2002 (17.09.2002), Col.1, lines 50-53, Col., lines 29-30 & Col.5, lines 10-17	1-2, 19, 21-24, 26-34, 48 & 49 3-18, 20, 25, & 35-47

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